

AMENDMENTS TO THE SPECIFICATION

Page 9, please replace paragraph [0030] with the following:

[0030] The superionic conductive layer 30 acts as a polymerization initiator for a suite of vinyl monomers such as methacrylates, acrylates, styrenes, vinylpyridines, acrylonitrile, and acrylamides via a reaction known as “living” radical polymerization. Examples of superionic conductive layers 30 include transition-metal complexes containing copper, lead, and silver. Desirable superionic conductive layers 30 include copper bromide (CuBr) and copper selenide (Cu₂Se). Living polymerization reactions are generally free from side reactions such as termination and chain transfer and can thus generate polymers of well defined architecture and molecular weights. Living radical polymerization reactions are activated by at least two different mechanisms, depending on the desired polymer. Some reactions proceed immediately when a monomer contacts the superionic conductor. Others require initiation by light or another chemical species. The polymerization reaction can also be controlled such that it proceeds at a rate that allows the polymers 46 (Fig. 1(d)) to form a highly organized matrix 40. It should be understood that the polymers 46 are simplistically represented in FIGS. 1(c) and 1(d) (and also FIGS. 3(d) and 4(b)-(d)). Accordingly, specific structure for the polymers 46 and matrix 40 is not shown. Living polymerization reactions are well known and are further described in an article by Kamigaito, et al., entitled, “Metal-Catalyzed Living Radical Polymerization,” Chem. Rev. 101, 3689-3745(2001), which is hereby incorporated by reference in its entirety.

Page 12, please replace paragraph [0038] with the following:

[0038] FIG. 6 illustrates a typical processor system 600, which includes a memory circuit 640 comprising an array of variable resistance memory elements formed from the polymer-based memory cells described above. A processor system 600, such as a computer system, generally comprises a central processing unit (CPU) 620, such as a microprocessor, a digital signal processor, or other programmable digital logic devices,

which communicates with an input/output (I/O) device 630 over a bus 610. The memory 640 communicates with the system over bus 610 typically through a memory controller. The system 600 can also include floppy disk drive 650 and CD ROM disk drive 660, which communicate with the system 600 over bus 610.